



globus online

Globus Online: Reliable Data Movement via SaaS

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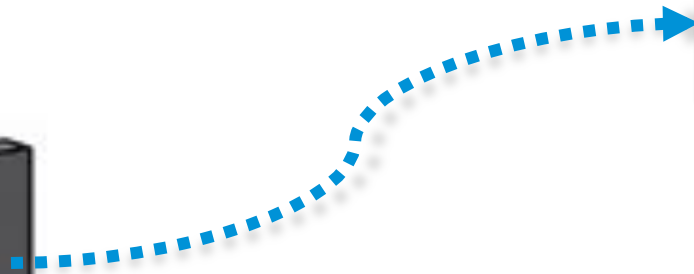


Data Movement

*"I need my data **over there** – at my _____" (supercomputing center, campus server, etc.)*



Data Source

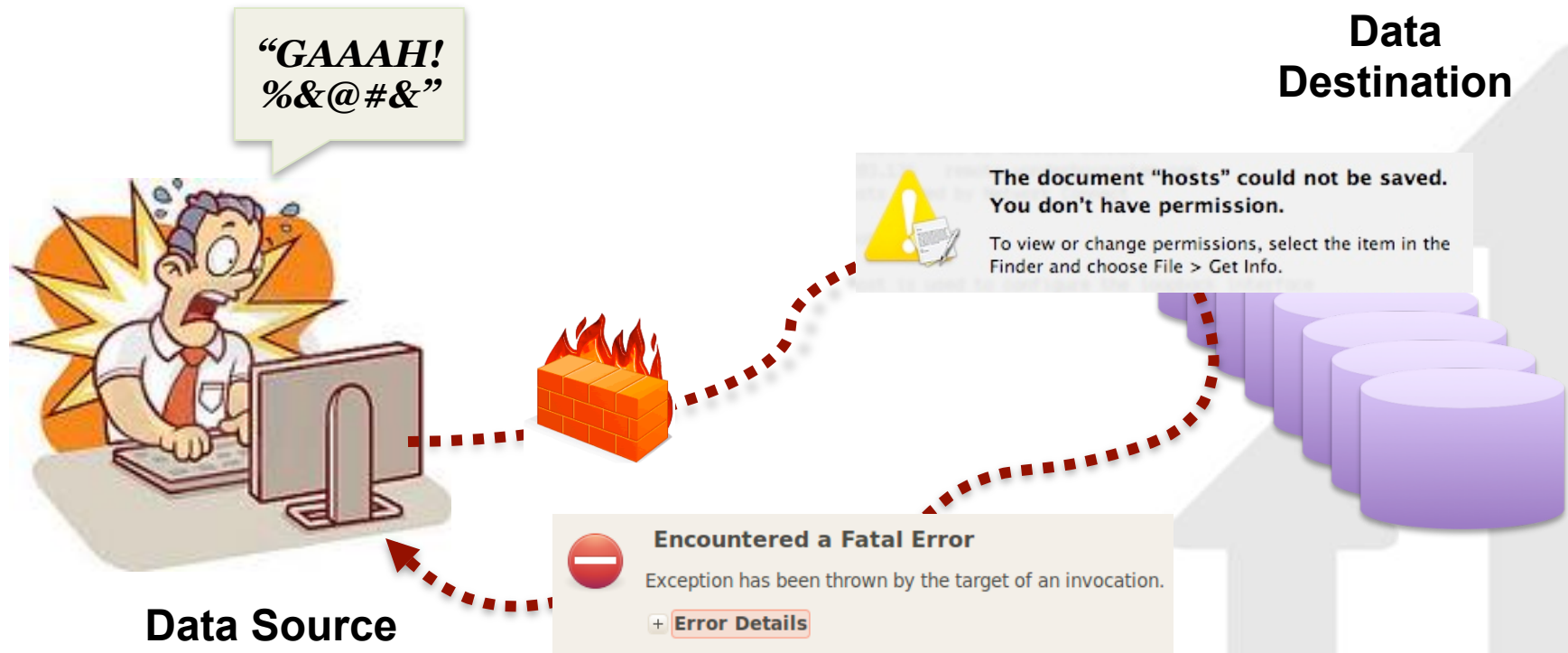


Data Destination

Trivial, right?



What's the big deal?



Reality is tedious and time-consuming



What is Globus Online?

- **Reliable file transfer.**
 - Easy “fire and forget” file transfers
 - Automatic fault recovery
 - High performance
 - Across multiple security domains
- **No IT required.**
 - New features automatically available
 - Works with existing GridFTP servers
 - No client software installation
 - Consolidated support and troubleshooting
 - Globus Connect solves “last mile problem”



“I moved 400 GB of files and didn’t even have to think about it.”

– Lawrence Berkeley National Lab



“It’s just not a big deal to move big data anymore.”

– Initiative for Biomedical Informatics

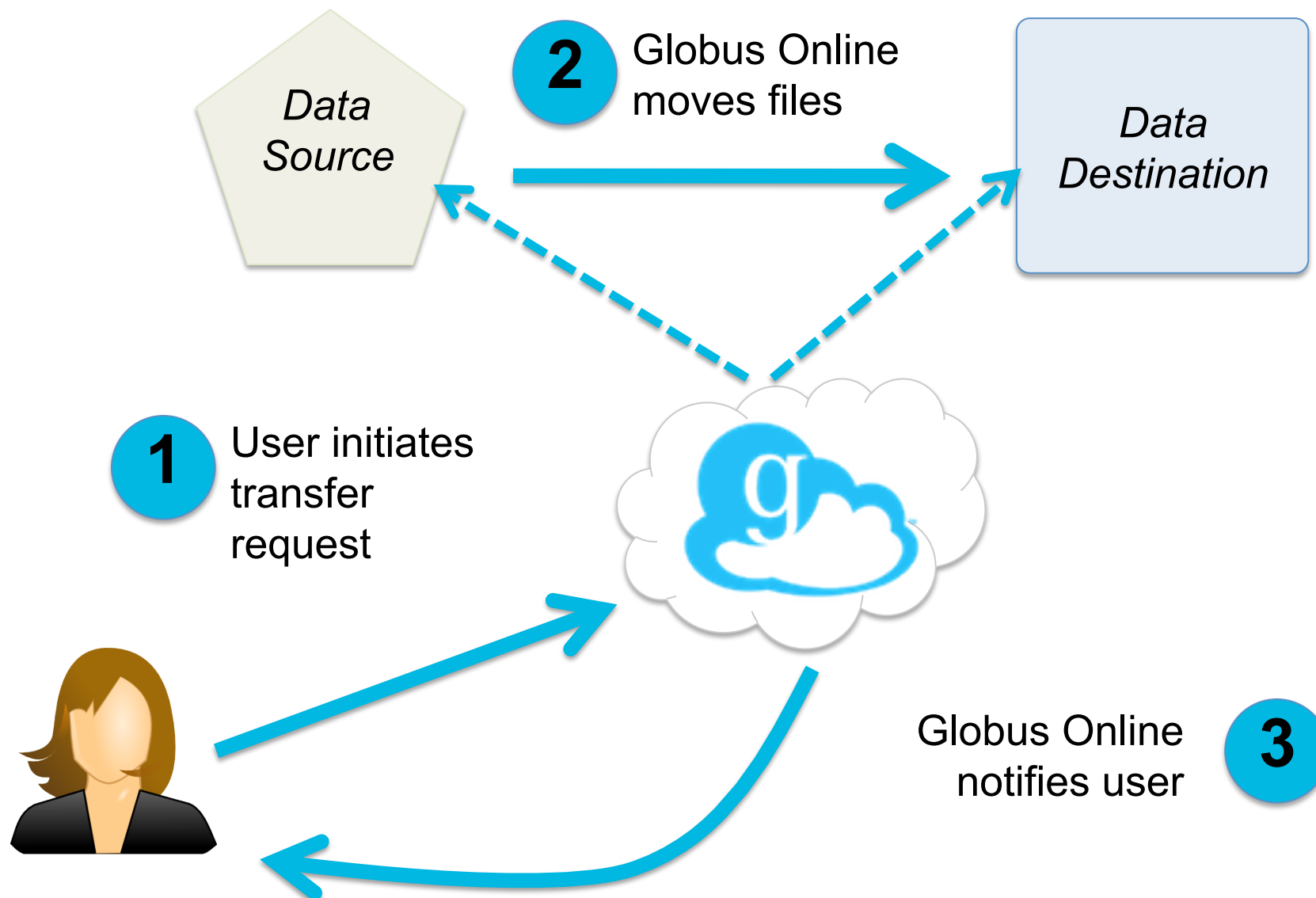


“Fantastic! I have started using globus connect to transfer data, and it only took me 5 minutes to set up. Thank you!”

– NERSC user



How It Works





Globus Online Highlights



Web interface

Command line interface

```
ls alcf#dtn:~  
scp alcf#dtn:~/myfile \  
nersc#dtn:~/myfile
```

HTTP REST interface

```
POST https://transfer.api.  
globusonline.org/ v0.10/  
transfer <transfer-doc>
```

- Fire-and-forget data movement
- Many files and lots of data
- Third-party transfers
- Performance optimization
- Across multiple security domains
- Expert operations and support



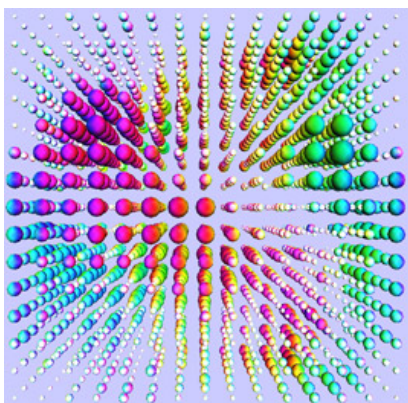
GridFTP servers
FTP servers

High-performance
data transfer nodes

Globus Connect
on local computers



Case Study: Lattice QCD



- **Fast:** Reduced transfer times
- **Easy:** Fire-and-forget transfers
 - Automated retry
 - No file pre-staging
 - No complex infrastructure
 - Convenient CLI or GUI interfaces

Indiana University
researcher moved ~6
TB from Oak Ridge to
TACC in 2 days

*“Globus Online frees up my time to
do more creative work than typing
scp commands or devising scripts to
initiate and monitor progress to move
many files.”*

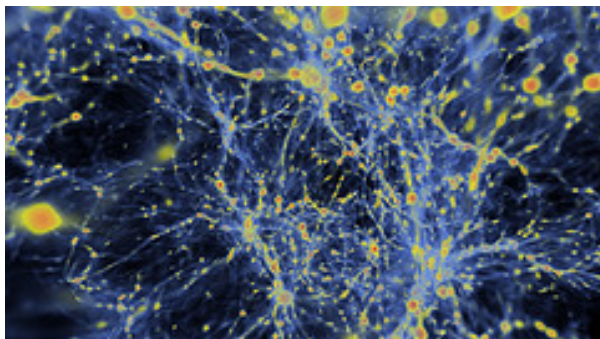
*“I moved 100 7.3 GB files
tonight in about 1.5 hours. I am
very impressed. I also like the
new commands and help
system.”*

TACC

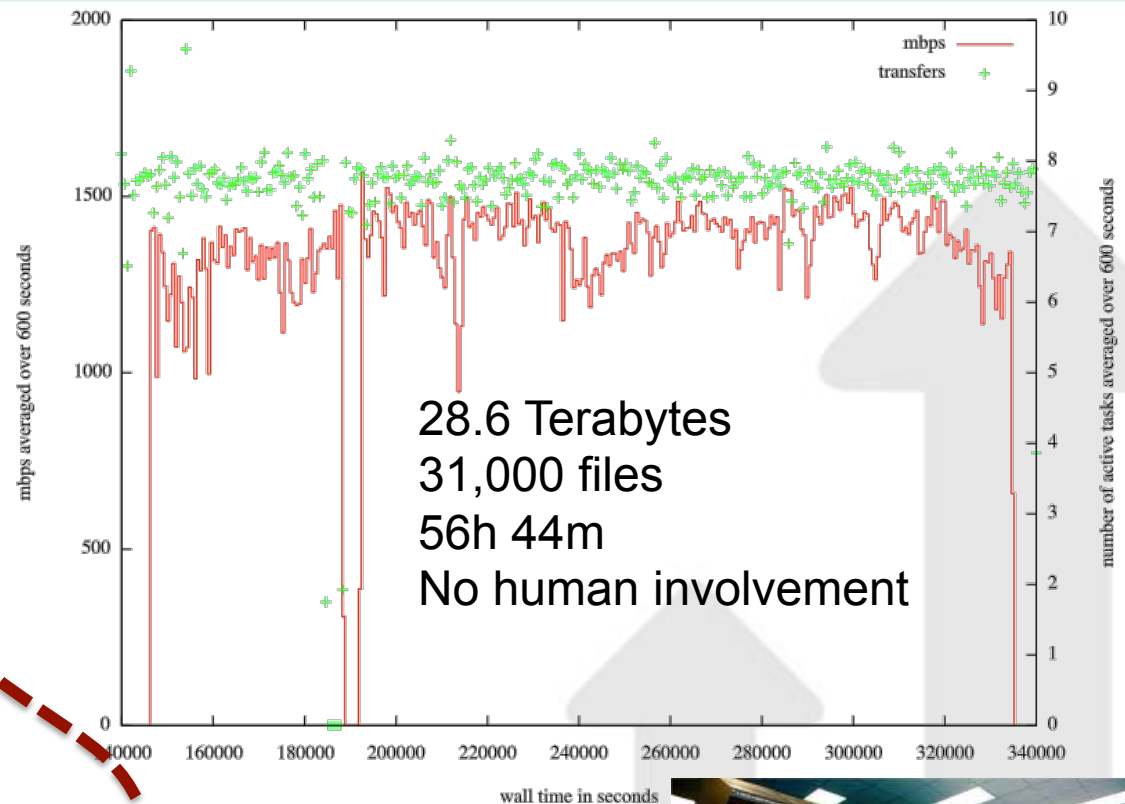




Case Study: Astrophysics



Astrophysics simulation data
generated in Tennessee,
moved to Illinois for visualization
(Enzo, UCSD; Futures Lab, Argonne)





User Stats and Stories

- **1.20.11: Moved 100 7.3-GB files in 88 minutes**
 - Improved transfer rate from 20 Mb/sec to 1100 Mb/sec
 - Same transfer would have taken over 3 days with scp
- **2.8.11: Moved 108 GB in 35 minutes**
- **4.23.11: Moved ~1.5 TB in 6 hours**

-
- *“Globus Online is the most beneficial grid technology I have ever seen.”*
 - *“I moved 400 GB and didn’t even have to think about it.”*
 - *“I’m averaging 40 Mb/s and can even reach 400 Mb/s – that’s insanely fast.”*
 - *“[Globus Online] frees up my time to do more creative work.”*
 - *“Without Globus Online it would have been impossible to move this data.”*
 - *“Fantastic! It only took me 5 minutes to set up. Thank you!”*



Getting Started (2 easy steps)

1. **Sign up:** Visit www.globusonline.org to create an account

globus online

Already a member? [Sign-in.](#)

Create an account

Full Name

Email

Username

Password Strong

Confirm Password

Terms of Service Last Updated: 10-Nov-2010

This is a legal agreement between you and Globus Consortium, Inc. By using or accessing this website or any website hosted by Globus Consortium, Inc. ("Sites"), or by accessing or using any part of the Globus Online file transfer service ("Service"), you agree to be bound by these Terms of Service and the Globus Online Privacy Policy, which are collectively referred to as the "Agreement". If you do not agree to these terms then you have no right to access or use the Service. The Service is provided by Globus Online from time to time in accordance with the Agreement.

☒ I agree to the Terms of use.

[Cancel](#) [Register](#)

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Please standby while your file transfer account is created.

Provisioning in Progress
(This may take a few minutes.)



Globus Online Endpoints



XSEDE

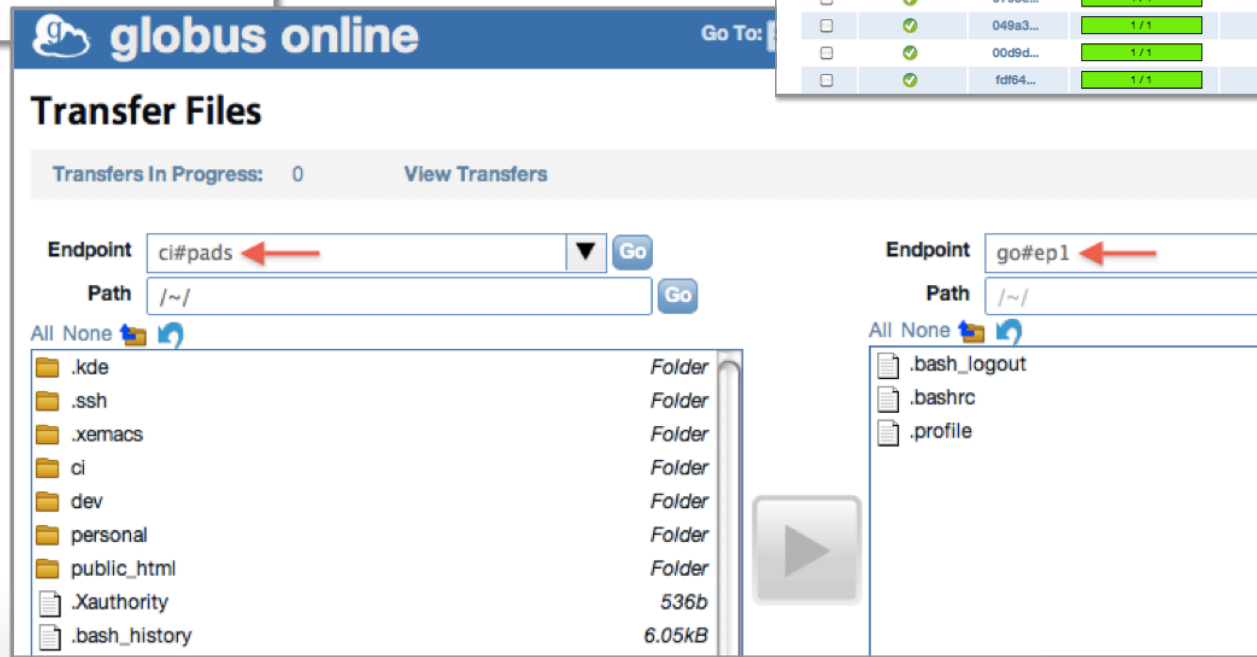
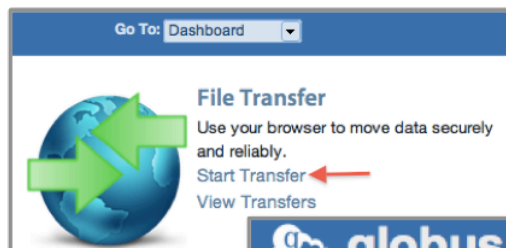
Extreme Science and Engineering
Discovery Environment





Getting Started (2 easy steps)

2. **Start moving files:** Pick your data and where you want to move it, then click to transfer



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Go To: View Transfers

Transfer Activity

Cancel

1 of 1

	Status	ID	Task Progress	Username	Completion Time
<input type="checkbox"/>	✓	5fd30...	3 / 3	vas	11/18/2010 07:31 PM
<input type="checkbox"/>	✓	f091a...	1 / 1	vas	11/18/2010 07:14 PM
<input type="checkbox"/>	✓	0793e...	1 / 1	vas	11/17/2010 08:55 PM
<input type="checkbox"/>	✓	049a3...	1 / 1	vas	11/17/2010 08:55 PM
<input type="checkbox"/>	✓	00d9d...	1 / 1	vas	11/17/2010 08:55 PM
<input type="checkbox"/>	✓	fd64...	1 / 1	vas	11/17/2010 08:55 PM



Globus Connect

Globus Connect Installation

Globus Connect allows you to use Globus Online to transfer files to and from your computer.

[Need Help? Click Here](#)

Step One: Choose Your Download



Globus Connect
For Mac OS X



Globus Connect
For Linux



Globus Connect
For Windows

Step Two: Get Your Globus Connect Setup Key

Endpoint Name:

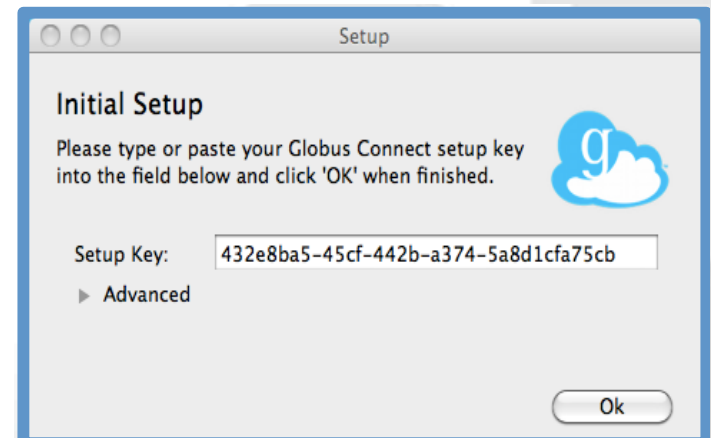
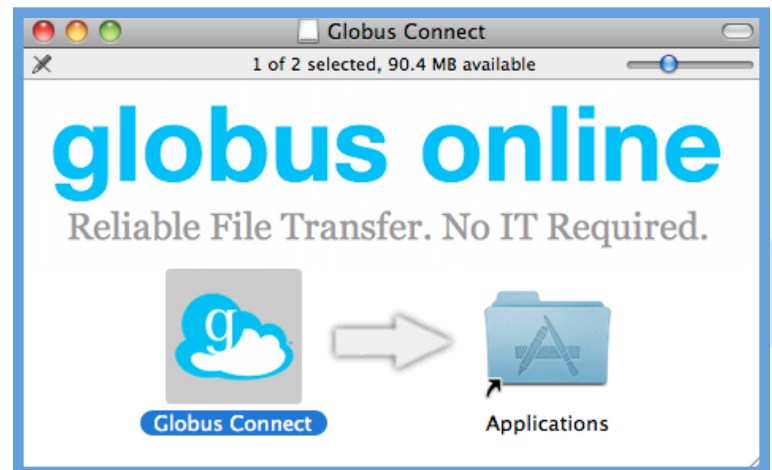
Description:

[Generate Setup Key](#)

Step Three: Finish Globus Connect Setup

Copy the setup key displayed above. Run Globus Connect and paste the key into the Initial Setup window when prompted. This setup key can only be used once.

[Close](#)





File Movement Options

We strive to make Globus Online broadly accessible...

- Researchers with no IT background can just move files using the **Web GUI**
- Developers who want to automate workflows can use the **Command Line Interface (CLI)**
- System builders who don't want to re-engineer file transfer solutions can use the **REST API**



File Transfer with CLI (2 options)

- **transfer**: Offers increased flexibility in specifying a list of individual files or directories for transfer between endpoints

Synchronize files

```
$ transfer  
Slac#dtn/~/.adata me#lapep/mydir -s -r  
<Ctrl-D>  
Task ID: 7f2397f7-ddf2-0435-ab40-359953405ad2  
Created transfer task with 1 file(s)  
$ _
```

- **scp**: A subset of transfer's functionality packaged as the familiar scp, but with extensions for reliability and security

Globus Online extension (run detached task in background)

```
$ scp -D -r o1cf#/~/.myfile* mylaptop:/~/projects/p1  
Task ID: 4a3c471e-edef-11df-aa30-1231350018b1  
$ _
```




For More Information

- **Visit <https://www.globusonline.org/signup> to:**
 - Get a free account and start moving files
- **Visit www.globusonline.org for:**
 - Tutorials
 - FAQs
 - Pro Tips
 - Troubleshooting
- **Contact support@globusonline.org for:**
 - Help getting started
 - Help using the service